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Mineral Industry Surveys

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MOLYBDENUM IN MAY 2004

Domestic production of molybdenum in concentrate in May 2004 was about 18% more than that of the previous month and was about 45% more than that of May 2003, according to the U.S. Geological Survey. Producer stocks of molybdenum in concentrate, oxide, and other product forms were about 4,730 metric tons (t) at the beginning of 2004, and 4,740 t at the end of May.

According to Ryan's Notes (2004b), the May monthly average prices for U.S. ferromolybdenum ranged from $14.013 to $14.750 per pound of molybdenum content, compared with $15.222 to $15.889 in April. European ferromolybdenum monthly averages ranged from $32.375 to $33.438 per kilogram of molybdenum content in May as compared to $37.444 to $39.000 in April. In May, worldwide molybdenum oxide prices ranged from $13.300 to $13.731 per pound versus $15.122 to $15.750 in April.

Thompson Creek Metal Co., Englewood, CO, informed some of its Japanese customers that it would be supplying some of their moly oxide requirements from its United States facility rather than from its Endako Mine in British Columbia, Canada (Ryan's Notes, 2004b). The rock slides at Endako early in 2004 forced Thompson Creek to mine lower ore grades at the site, and consequently production was lower than in 2003. Rather than delay shipping to Japan, Thompson Creek was to ship moly oxide from its Langloth, PA, roaster to meet some customer requirements.

Phelps Dodge Corp. Phoenix, AZ, has joined other producers in increasing molybdenum output (Ryan's Notes, 2004a). Phelps Dodge's molybdenum output increased by over 17% in the first quarter to 6,100 t (13.5 million pounds) compared with 5,200 t (11.5 million pounds) in the same quarter in 2003. A Phelps Dodge official reportedly noted that the company has no intention of restarting its Climax Mine (Colorado) and was not likely to increase production at its Henderson Mine (Colorado) beyond plan. Corporación Nacional del Cobre de Chile's molybdenum production in Chile increased to 7,285 t in the first quarter of 2004 from 5,185 t in the same period in 2003. Production by Kennecott Utah Copper's Bingham Canyon Mine in Utah in the first quarter increased 33.3% to 1,600 t (3.52 million pounds) compared with the same period in 2003.

Included in this Mineral Industry Surveys are U.S. production and shipments of molybdenum concentrates and materials, plus U.S. consumption, by end use, and stocks of molybdenum material in April and May 2004; also included are trade data for March and April 2004.

References Cited

Ryan's Notes, 2004a, PD's moly output up over 17%: Ryan's Notes, v. 10, no. 18, May 3, p. 2.
Ryan's Notes, 2004b, Ferroalloy notes: Ryan's Notes, v. 10, no. 22, May 31, p. 5-6.
Ryan's Notes, 2004c, [untitled]: Ryan's Notes, v. 10, no. 22, May 31, p. 4.

TABLE 1
U.S. SALIENT MOLYBDENUM CONCENTRATE STATISTICS[1]

(Metric tons, contained molybdenum)

	2003	2004		
	January-December[p]	April	May	Year to date
Production	34,400	3,070	3,610	15,700
Shipments:[2]				
Domestic	26,800	2,300	2,660	11,900
Export	7,750	619	863	4,030

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]As reported by producers.

TABLE 2
U.S. REPORTED PRODUCTION AND SHIPMENTS OF MOLYBDENUM PRODUCTS[1]

(Metric tons, contained molybdenum)

	2003	2004		
	January-December[p]	April	May	Year to date
Gross production	41,400	4,630	4,880	25,400
Internal consumption[2]	29,600	2,980	2,930	15,800
Gross shipments	30,100	3,280	2,900	15,100

[p]Preliminary.
[1]Data are rounded to no more than three significant digits.
[2]Includes molybdic oxides, metal powder, ammonium molybdate, sodium molybdate, and other.

TABLE 3

U.S. REPORTED CONSUMPTION, BY END USES, AND CONSUMER STOCKS OF MOLYBDENUM MATERIALS[1]

(Kilograms, contained molybdenum)

End use	Molybdic oxides	Ferro molyb-denum[2]	Ammonium and sodium molybdate	Molyb-denum scrap	Other	Total
2004, April:						
Steel:						
Carbon	12,700 r	W	--	--	W	12,700 r
High-strength low-alloy	37,400 r	8,320 r	--	--	11,300	57,100 r
Stainless and heat-resisting	205,000	69,600	--	W	6,780	281,000
Full alloy	111,000 r	187,000 r	--	--	1,510	299,000 r
Tool	45,400	W	--	--	--	45,400
Total	411,000 r	265,000 r	--	W	19,600	696,000 r
Cast irons (gray, malleable, and ductile iron)	W	8,300	--	--	763	9,060
Superalloys	73,600	W	--	(3)	106,000	180,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	211	1,680 r	--	--	20	1,910 r
Mill products made from metal powder[4]	--	--	--	--	135,000 r	135,000 r
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,380	1,380
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	16,400	16,400
Other	1,090	35,600	75,500	16	16,800	129,000
Grand total	563,000 r	311,000 r	75,500	16	296,000 r	1,250,000 r
Stocks, April 30, 2004	464,000 r	173,000	2,720	26,800	858,000	1,520,000 r
2004, May:						
Steel:						
Carbon	17,900	W	--	--	W	17,900
High-strength low-alloy	38,100	8,600	--	--	11,300	58,000
Stainless and heat-resisting	208,000	64,000	--	W	6,780	279,000
Full alloy	109,000	204,000	--	--	1,510	315,000
Tool	54,100	W	--	--	--	54,100
Total	427,000	277,000	--	W	19,600	724,000
Cast irons (gray, malleable, and ductile iron)	W	8,900	--	--	763	9,660
Superalloys	65,800	W	--	(3)	105,000	170,000
Alloys: (other than steels, cast irons, and superalloys)						
Welding materials (structural and hard-facing)	--	W	--	--	6	6
Other alloys	349	816	--	--	20	1,180
Mill products made from metal powder[4]	--	--	--	--	123,000	123,000
Cemented carbides and related products[5]	--	--	--	--	W	W
Chemical and ceramic uses:						
Pigments	--	--	W	--	--	W
Catalysts	77,300	--	W	--	W	77,300
Other chemicals	--	--	--	--	1,380	1,380
Miscellaneous and unspecified uses:						
Lubricants	--	--	--	--	17,400	17,400
Other	1,090	30,500	74,200	16	16,800	123,000
Grand total	572,000	317,000	74,200	16	284,000	1,250,000
Stocks, May 31, 2004	420,000	182,000	5,350	12,900	848,000	1,470,000

rRevised. W Withheld to avoid disclosing company proprietary data; included in "Other" of the "Miscellaneous and unspecified uses" category. -- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Includes calcium molybdate.

[3]Included in "Other" of the "Superalloys" category.

[4]Includes ingot, wire, rod, and sheet.

[5]Includes construction, mining, oil and gas, metalworking machinery.

TABLE 4
U.S. EXPORTS OF MOLYBDENUM ORES AND CONCENTRATES
(including roasted concentrate), BY COUNTRY[1]

(Kilograms, contained molybdenum)

Country	2003 January-December	2004 March	2004 April	2004 Year to date
Australia	102,000	--	5,710	9,250
Austria	--	33,600	33,600	124,000
Belgium	3,190,000	93,400	216,000	984,000
Brazil	42,600	2,420	6,670	11,000
Canada	910,000	20,500	158,000	229,000
Chile	368,000	94,200	97,100	926,000
China	82,600	--	--	--
Costa Rica	22,500	1,840	--	13,800
India	44,300	--	--	--
Italy	20,300	--	--	--
Japan	2,000,000	205,000	286,000	615,000
Korea, Republic of	61,400	6,280	6,840	25,000
Mexico	3,730,000	9,370	82,600	271,000
Netherlands	10,900,000	656,000	656,000	1,870,000
Sweden	25,700	--	--	--
Taiwan	9,590	--	455	8,830
United Kingdom	7,880,000	553,000	319,000	2,170,000
Other	137,000	50,400	209,000	297,000
Total	29,500,000	1,730,000	2,080,000	7,550,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 5
U.S. EXPORTS OF FERROMOLYBDENUM, BY COUNTRY[1]

(Kilograms, contained molybdenum)

Country	2003 January-December	2004 March	2004 April	2004 Year to date
Australia	873	273	--	818
Canada	547,000	48,200	147,000	309,000
Denmark	241	--	--	--
Japan	61	--	--	--
Mexico	43,100	1,850	--	12,100
Netherlands	25,500	--	--	--
Total	617,000	50,300	147,000	322,000

-- Zero.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 6

U.S. IMPORTS FOR CONSUMPTION OF MOLYBDENUM PRODUCTS[1]

(Kilograms, unless otherwise specified)

	January-December 2003			April 2004		
Material	Gross weight	Contained molybdenum	Value (c.i.f.)[2] (thousands)	Gross weight	Contained molybdenum	Value (c.i.f.)[2] (thousands)
Ore and concentrates roasted	6,310,000	3,960,000	$41,900	894,000	549,000	$9,400
Ore and concentrates other	2,870,000	1,230,000	9,580	1,600,000	524,000	3,310
Molybdenum chemicals:						
Oxides and hydroxides	1,300,000	NA	9,780	35,500	NA	470
Molydates of ammonium	1,620,000	937,000	11,600	79,900	33,800	836
Molydates (all others)	324,000	145,000	1,200	NA	NA	NA
Molybdenum orange	987,000	NA	4,440	112,000	NA	501
Ferromolybdenum	5,740,000	3,690,000	38,200	613,000	394,000	6,990
Molybdenum powders	57,000	43,100	2,000	9,070	7,740	445
Molybdenum unwrought	139,000	136,000	1,700	135	122	10
Molybdenum waste and scrap	425,000 [r]	388,000	5,000	40,900	40,700	591
Molybdenum wire	10,600	NA	776	1,210	NA	85
Molybdenum other	79,900	NA	6,420	6,890	NA	881
Total	19,900,000	10,500,000	133,000	3,390,000	1,550,000	23,500

[r]Revised. NA Not available.

[1]Data are rounded to no more than three significant digits; may not add to totals shown.

[2]Cost, insurance, and freight at U.S. ports.

Source: U.S. Census Bureau.